

AMENDED CLAIMS

[received by the International Bureau on 4 August 1998 (04.08.98);
original claim 1 amended ;
remaining claims unchanged (1 page)]

- 5 Add 1017
1. A cold separation device for separating an elongate member along a substantially longitudinal axis thereof, the device comprising a separation unit having a cutter, support means extending upstream and downstream of the separation unit to support the said elongate member, and a feeder means to feed the said elongate member towards and through the separation unit, wherein the feeder means feeds the said elongate member, and the support means extend in, a direction substantially parallel to the said substantially longitudinal axis of the elongate member.
 2. A device according to Claim 1, wherein the cutter comprises saw blade, the said blade being a reciprocating blade or a band saw blade.
 3. A device according to Claim 1 or 2, wherein the speed of the blade and/or the feeder means is adjustable.
 4. A device according to Claim 3, wherein the speed of the blade is adjustable between 40 and 190 metres per minute.
 - 15 5. A device according to Claim 3 or 4, wherein the speed of the feeder means is adjustable between 0 and 1 metre per minute.
 6. A device according to any preceding claim, wherein the separation unit comprises a support means to support the underside of the elongate member.
 7. A device according to Claim 6, wherein the separation unit comprises means to constrain lateral movement of the elongate member passing therethrough.
 - 20 8. A device according to Claim 7, wherein the said means to constrain lateral movement of the elongate member comprises at least one pair of horizontally spaced apart rollers, said rollers being rotatable about a substantially vertical axis.
 9. A device according to Claim 8, wherein each roller of a pair is mounted so that the distance therebetween is variable.
 - 25 10. A device according to any preceding claim, wherein the separation unit comprises a roller arranged to exert a downward pressure on a part of an elongate member being cut.
 11. A device according to any preceding claim, wherein upstream of the separation unit the support means is provided with alignment means to align a sub-
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stantially longitudinal axis of an elongate member with the cutter of the separation unit.

12. A device according to Claim 11, wherein the said alignment means comprises at least two guides each mounted so as to be movable laterally to the support means.

13. A device according to any preceding claim, wherein the said support means comprises at least one support table located upstream of the separation unit and at least one table located downstream of the separation unit.

14. A device according to Claim 13, wherein at least one table mounted downstream of the separation unit is a receiving table and is so dimensioned as to enable it to receive and support separated sections issuing from the separation unit.

15. A device according to Claim 14, wherein the said receiving table comprises at least one pair of support members, each member being mounted on the table so as to be movable horizontally and vertically so as to engage with and support a part of a separated elongate member

16. A device according to Claim 14 or 15, wherein the receiving table further comprises means to move a section resting thereon laterally across the table.

17. A device according to Claim 14 or 15, wherein the said means comprise at least one conveyor, the or each conveyor being provided with at least one upstanding chock protruding above the surface of the table so as to engage with a section resting on the table.

18. A device according to any of Claims 13 to 17, wherein at least one of the tables comprises a plurality of rollers.

19. A device according to Claim 18, wherein the rollers of at least one table are driven.

20. A device according to any of Claims 13 to 19, wherein at least one table located upstream of the separation unit comprises the said feeder means.

21. A process for separating elongate members using a longitudinal cold separation device according to any of Claims 1 to 20 comprising the steps of:

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- e. placing an elongate member on the support means of the device;
- f. aligning a substantially longitudinal axis of the elongate member with the cutter of the separation unit;
- g. feeding the elongate member through the separation unit; and
- h. supporting the resulting separated sections.

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22. A process according to Claim 21, further comprising the step of constraining lateral movement of the elongate member in the separation unit.

23. A process according to Claim 21 or 22, further comprising the step of supporting the separated sections issuing from the separation unit.

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24. A process according to any of Claims 21 to 23, characterised by controlling the speed of the blade and/or the feeder means.

25. A longitudinal cold separation unit substantially as shown in, or as described with reference to, the drawings.

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